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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Jin Feng

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MICROSOFT CORPORATION
ONE MICROSOFT WAY
REDMOND, WA 98052

EXAMINER

ALVESTEFFER, STEPHEN D

ART UNIT

PAPER NUMBER

2175

NOTIFICATION DATE

DELIVERY MODE

05/27/2010

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

DBOUTON@MICROSOFT.COM

vffiling@microsoft.com

stevensp@microsoft.com

Office Action Summary	Application No. 10/804,619	Applicant(s) FENG ET AL.	
	Examiner Stephen Alvesteffer	Art Unit 2175	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 November 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,6-9,11,13,14,25-28,30 and 31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,6-9,11,13,14,25-28,30 and 31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

This Office Action is responsive to the Amendment filed November 4, 2009.

Claim 1 is amended. Claims 2-5, 10, 12, 15-24, and 29 are previously cancelled. Claim 31 is new. Claims 1, 6-9, 11, 13, 14, 25-28, 30, and 31 remain pending.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 6-9, 11, 13, 14, 25-28, 30, and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Teng et al. (hereinafter Teng), United States Patent 6,240,456, and Walbeck et al. (hereinafter Walbeck), United States Patent 7,310,670.

Regarding claim 1, Teng teaches a system for use in client/server computing comprising:

a client that interfaces with an applications program (see Teng Figure 2 and column 6 lines 1-21; *"the network client 20 includes an application process 60"*);

a client print spooler operating on the client, the applications program operable to communicate a print request to the client print spooler (see Teng Figure 2 and column 6 lines 1-21; *"Generally, the network client 20 includes an application process 60 linked to*

Art Unit: 2175

a system API 62, such as a standard text API or drawing API, which is, in turn, linked to a system spooler 64”);

a user interface manager operating on the client and coupled to the client print spooler (see Teng Figure 2 and column 6 lines 1-21; “*Generally, the network client 20 includes an application process 60 linked to a system API 62, such as a standard text API or drawing API, which is, in turn, linked to a system spooler 64”);*

a first communications channel coupling, via a network, the client print spooler with a server print spooler operating on a print server, the print server distinct from the client, the print server coupled to a printer, wherein the first communications channel provides for communicating data from the application and for control of printing according to the print request (see Teng Figure 2 and column 6 lines 1-21; “*The system spooler 64 includes a system Internet API or sockets driver 66 which provides a means for the network client 20 to communicate with the network server 49 via the Internet 68... The Internet server 70 is linked to a server scripter component 72, such as an Internet Server API (ISAPI) wrapper, which includes a HTTP print server component. A system spooler 74 is connected to the server scripter component 72 via an API 76 and to the printer 50 which has a URL address assigned thereto*”); and

a second communications channel coupling, via the network, the client print spooler with the print server, the second communications channel distinct from the first communication channel, wherein the client print spooler receives messages from the printer via the print server via the second communications channel (Walbeck, addressed below), and wherein the messages are provided as language neutral

Art Unit: 2175

messages from the print server and are converted to language specific messages by the user interface manager and the language specific messages are presented to a user of the client (see Teng column 7 lines 10-34; *"Since standard HTTP POST messaging also provides a means for allowing status messages to be returned to the network client 20 in response to an issued HTTP POST request, the network server 49 can also be used to monitor and return the status of the print job request to the network client 20 via the Internet... The HTTP status messages received at the network client 20 may then be forwarded to the user in the form of a graphical user interface, textual message, or the like which those of skill in the art will understand how to formulate"*, wherein the HTTP status messages are language neutral and are interpreted and converted by the graphical user interface).

Teng does not explicitly teach a second communications channel coupling, via the network, the client print spooler with the print server, the second communications channel distinct from the first communication channel, wherein the client print spooler receives messages from the printer via the print server via the second communications channel. Walbeck teaches allocating separate asynchronous communications channels to facilitate the flow of data traffic (see Walbeck column 2 lines 10-28; *"Support for streaming data or asynchronous data is provided by allocating time slots on the network and allowing two intelligent nodes to talk directly to each other as arbitrated by the active network server. The active network server can also allocate separate data channels such that large amounts of data traffic can flow independently of the operations of the main network"*). It would have been obvious to one of ordinary skill in

Art Unit: 2175

the art at the time the invention was made to communicate asynchronous data in separate distinct communications channels as taught by Walbeck in the invention of Teng in order to facilitate the flow of data between the client and server.

Regarding claim 6, Teng substantially teaches a system for use with a printer comprising:

a print server coupled to the printer (see Teng Figure 2, showing print server 49 and printer 50);

a server print spooler (see Teng Figure 2, item 74) operating on the print server, the server print spooler in communication with a client print spooler operating on a client (see Teng Figure 2, item 64), the communication via a first asynchronous communications channel (see Teng Figure 2, item 68), the client print spooler coupled to an applications program having a print capability (see Teng Figure 2, item 60), the applications program operable to communicate a print request to the client print spooler (see Teng Figure 2, item 20);

wherein the client includes a user interface manager that communicates with the print server by means of a second asynchronous communications channel, the second asynchronous channel distinct from the first asynchronous channel, and further wherein the user interface manager responds to a user interface message sent from the print server via the second asynchronous channel (Walbeck, addressed below).

Teng does not explicitly teach the client includes a user interface manager that communicates with the print server by means of a second asynchronous communications channel, the second asynchronous channel distinct from the first

Art Unit: 2175

asynchronous channel, and further wherein the user interface manager responds to a user interface message sent from the print server via the second asynchronous channel. Walbeck teaches allocating separate asynchronous communications channels to facilitate the flow of data traffic (see Walbeck column 2 lines 10-28; "*Support for streaming data or asynchronous data is provided by allocating time slots on the network and allowing two intelligent nodes to talk directly to each other as arbitrated by the active network server. The active network server can also allocate separate data channels such that large amounts of data traffic can flow independently of the operations of the main network*"). It would have been obvious to one of ordinary skill in the art at the time the invention was made to communicate asynchronous data in separate distinct communications channels as taught by Walbeck in the invention of Teng in order to facilitate the flow of data between the client and server.

Regarding claim 7, Teng/Walbeck teaches a user display and wherein the message sent to the client user interface manager is a language neutral message that is interpreted by the user interface manager and converted to another representation for the user display (see Teng column 7 lines 10-34; "*Since standard HTTP POST messaging also provides a means for allowing status messages to be returned to the network client 20 in response to an issued HTTP POST request, the network server 49 can also be used to monitor and return the status of the print job request to the network client 20 via the Internet... The HTTP status messages received at the network client 20 may then be forwarded to the user in the form of a graphical user interface, textual message, or the like which those of skill in the art will understand how to formulate*",

wherein the HTTP status messages are language neutral and are interpreted and converted by the graphical user interface).

Regarding claim 8, Teng/Walbeck teaches that the client user interface manager converts a globally unique identifier from the print server to a user understandable message on said display (see Teng column 7 lines 10-34; "*Since standard HTTP POST messaging also provides a means for allowing status messages to be returned to the network client 20 in response to an issued HTTP POST request, the network server 49 can also be used to monitor and return the status of the print job request to the network client 20 via the Internet... The HTTP status messages received at the network client 20 may then be forwarded to the user in the form of a graphical user interface, textual message, or the like which those of skill in the art will understand how to formulate*", the HTTP status messages must inherently be globally unique or else the system will not know which status to display to the user).

Regarding claim 9, Teng/Walbeck teaches that the client print spooler receives data from the applications program for transmission to the server print spooler operating on print server via the first asynchronous communications channel (see Teng Figure 2 and column 6 lines 1-21) and also wherein the print server communicates a message to the user interface manager via the second asynchronous communications channel (see Walbeck column 2 lines 10-28) and the client print spooler upon receipt of the print request from the applications program (see Teng column 7 lines 10-34).

Regarding claim 11, Teng/Walbeck teaches that the user interface message is a language neutral message sent by the print server through the second asynchronous

Art Unit: 2175

communications channel based on status of a print job being serviced by the print server (see Teng column 7 lines 10-34; *"Since standard HTTP POST messaging also provides a means for allowing status messages to be returned to the network client 20 in response to an issued HTTP POST request, the network server 49 can also be used to monitor and return the status of the print job request to the network client 20 via the Internet... The HTTP status messages received at the network client 20 may then be forwarded to the user in the form of a graphical user interface, textual message, or the like which those of skill in the art will understand how to formulate"*, wherein the HTTP status messages are language neutral and are interpreted and converted by the graphical user interface).

Regarding claim 13, Teng/Walbeck teaches that the user interface manager interprets the message and loads an executable component that responds to receipt of said message based on the contents of said message (see Teng column 7 lines 10-34; *"Since standard HTTP POST messaging also provides a means for allowing status messages to be returned to the network client 20 in response to an issued HTTP POST request, the network server 49 can also be used to monitor and return the status of the print job request to the network client 20 via the Internet... The HTTP status messages received at the network client 20 may then be forwarded to the user in the form of a graphical user interface, textual message, or the like which those of skill in the art will understand how to formulate"*).

Regarding claim 14, Teng/Walbeck teaches that the executable component accesses resources used by the executable component to display a message on a

Art Unit: 2175

display monitor (see Teng column 7 lines 10-34; "*The HTTP status messages received at the network client 20 may then be forwarded to the user in the form of a graphical user interface, textual message, or the like which those of skill in the art will understand how to formulate*").

Regarding claim 25, Teng substantially teaches a computer readable medium for use in client/server computing comprising instructions for:

providing an interface for an application to communicate with a client print spooler (see Teng Figure 2, item 64) operating on a client (see Teng Figure 2, item 20) which in turn communicates with a server print spooler (see Teng Figure 2, item 74) operating on a server (see Teng Figure 2, item 49), the client distinct from the server, said interface enabling the application to call a service routine on the server by means of an asynchronous remote procedure call, the service routine operable to service a print request of the application, the asynchronous remote procedure call made over a first communications channel (Walbeck, addressed below), wherein the server is a print server; and

responding to language neutral messages from the server sent over a second communications channel to the client print spooler, the second communications channel being distinct from the first communications channel, by interpreting the language neutral messages, the interpreting performed by a user interface manager operating on the client and coupled to the client print spooler, and presenting a display in response to receipt of said language neutral messages understandable by a user (see Teng column 7 lines 10-34; "*Since standard HTTP POST messaging also provides a means for*

Art Unit: 2175

allowing status messages to be returned to the network client 20 in response to an issued HTTP POST request, the network server 49 can also be used to monitor and return the status of the print job request to the network client 20 via the Internet... The HTTP status messages received at the network client 20 may then be forwarded to the user in the form of a graphical user interface, textual message, or the like which those of skill in the art will understand how to formulate", wherein the HTTP status messages are language neutral and are interpreted and converted by the graphical user interface).

Teng does not explicitly teach said interface enabling the application to call a service routine on the server by means of an asynchronous remote procedure call, the service routine operable to service a print request of the application, the asynchronous remote procedure call made over a first communications channel. Walbeck teaches allocating separate asynchronous communications channels to facilitate the flow of data traffic (see Walbeck column 2 lines 10-28; "*Support for streaming data or asynchronous data is provided by allocating time slots on the network and allowing two intelligent nodes to talk directly to each other as arbitrated by the active network server. The active network server can also allocate separate data channels such that large amounts of data traffic can flow independently of the operations of the main network*"). It would have been obvious to one of ordinary skill in the art at the time the invention was made to communicate asynchronous data in separate distinct communications channels as taught by Walbeck in the invention of Teng in order to facilitate the flow of data between the client and server.

Regarding claim 26, Teng/Walbeck teaches that the client user interface manager interprets the language neutral messages by converting them into language specific messages understandable by a user (see Teng column 7 lines 10-34; "*The HTTP status messages received at the network client 20 may then be forwarded to the user in the form of a graphical user interface, textual message, or the like which those of skill in the art will understand how to formulate*").

Regarding claim 27, Teng/Walbeck teaches that the server sends a globally unique identifier based on a status of said server and wherein the client converts said globally unique identifier to a user understandable message (see Teng column 7 lines 10-34; "*Since standard HTTP POST messaging also provides a means for allowing status messages to be returned to the network client 20 in response to an issued HTTP POST request, the network server 49 can also be used to monitor and return the status of the print job request to the network client 20 via the Internet... The HTTP status messages received at the network client 20 may then be forwarded to the user in the form of a graphical user interface, textual message, or the like which those of skill in the art will understand how to formulate*", the HTTP status messages must inherently be globally unique or else the system will not know which status to display to the user).

Regarding claim 28, Teng/Walbeck teaches that the client print spooler receives data from the application for transmission via the first communications channel to the server print spooler (see Teng Figure 2 and column 6 lines 1-21) and also wherein the server communicates a message to the user interface manager via the second communications channel and the client print spooler upon receipt of the print request

Art Unit: 2175

from the application (see Walbeck column 2 lines 10-28; see also Teng column 7 lines 10-34).

Regarding claim 30, Teng/Walbeck teaches that the user interface manager accesses an executable component upon receipt of the language neutral messages from the server and wherein the executable component accesses resources used by the executable component to display a message (see Teng column 7 lines 10-34; *"Since standard HTTP POST messaging also provides a means for allowing status messages to be returned to the network client 20 in response to an issued HTTP POST request, the network server 49 can also be used to monitor and return the status of the print job request to the network client 20 via the Internet... The HTTP status messages received at the network client 20 may then be forwarded to the user in the form of a graphical user interface, textual message, or the like which those of skill in the art will understand how to formulate"*).

Regarding claim 31, Teng/Walbeck teach that the display is presented including converted messages that are understandable by the user, said language neutral messages being converted into the converted messages (see Teng column 7 lines 10-34; *" The HTTP status messages received at the network client 20 may then be forwarded to the user in the form of a graphical user interface, textual message, or the like which those of skill in the art will understand how to formulate"*).

Response to Arguments

Applicants assert that Teng is silent regarding two distinct communications channels and does not provide any suggestion or motivation for two distinct communications channels as recited in claim 1. While examiner agrees with these assertions, Walbeck was provided in combination for teaching these features. Furthermore, Walbeck provides motivation for providing two distinct communications channels instead of one. Walbeck column 2 lines 10-28 teaches, "*Support for streaming data or asynchronous data is provided by allocating time slots on the network and allowing two intelligent nodes to talk directly to each other as arbitrated by the active network server. **The active network server can also allocate separate data channels such that large amounts of data traffic can flow independently of the operations of the main network***", emphasis added. It would have been obvious to one of ordinary skill in the art at the time the invention was made to communicate asynchronous data in separate distinct communications channels as taught by Walbeck in the invention of Teng in order to facilitate the flow of data between the client and server.

Applicants assert that Walbeck does not disclose "a first communications channel coupling, via a network, the client print spooler with a server print spooler operating on a print server" and "a second communications channel coupling, via the network, the client print spooler with the print server", because Walbeck is silent regarding the "client print spooler" and the "server print spooler" as recited in claim 1.

Art Unit: 2175

Examiner respectfully disagrees. Walbeck is relied upon only for its teaching of providing more than one communications channel to facilitate data flow. Teng Figure 2 and column 6 lines 1-21 (*"Generally, the network client 20 includes an application process 60 linked to a system API 62, such as a standard text API or drawing API, which is, in turn, linked to a system spooler 64"*) explicitly teach coupling with client and server printer spoolers. Furthermore, while Walbeck does not explicitly mention a "printer spooler", Walbeck does teach extensively that the invention may be used in a networked printer environment (see Walbeck Figure 1 and accompanying disclosure regarding Figure 1). One of ordinary skill in the art at the time the invention was made would also appreciate that a "print spooler" is necessary to the operation of a printer because a "print spooler" merely refers to the buffer area where print jobs are placed before they are processed by the printer itself.

Applicants assert that Walbeck teaches away from using print servers because Walbeck column 1 lines 32-42 discloses, "Although the network printer adapters do work, they are relatively expensive and therefore unsuitable for many home and small office environments". Examiner respectfully disagrees because the cited passage is taken out of context. The portion of Walbeck's disclosure cited by applicant as evidence of teaching away regards to the problems of prior art network printer adapters. Walbeck column 2 lines 1-9 further discloses that Walbeck "solves these and other problems by providing a **low-cost**, easy to use, flexible, reliable, and scalable network architecture/protocol that **allows multiple smart and dumb nodes to communicate**

Art Unit: 2175

via a common data/control channel or via **multiple channels**" (emphasis added).

Rather than teaching away from the combination of Teng and Walbeck, this provides further evidence that one of ordinary skill in the art at the time the invention was made would have been motivated to provide the multiple channels of Walbeck in the invention of Teng.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen Alvesteffer whose telephone number is (571)270-1295. The examiner can normally be reached on Monday-Friday 9:30AM-6:00PM.

Art Unit: 2175

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Bashore can be reached on (571)272-4088. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Stephen Alvesteffer
Examiner
Art Unit 2175

/S. A./
Examiner, Art Unit 2175

/Joshua D Campbell/
Primary Examiner, Art Unit 2178